June 30, 1931. C. H. LARSON 1,812,595

SASH VENTILATOR

Filed Oct. 6, 1928

Fig. 1

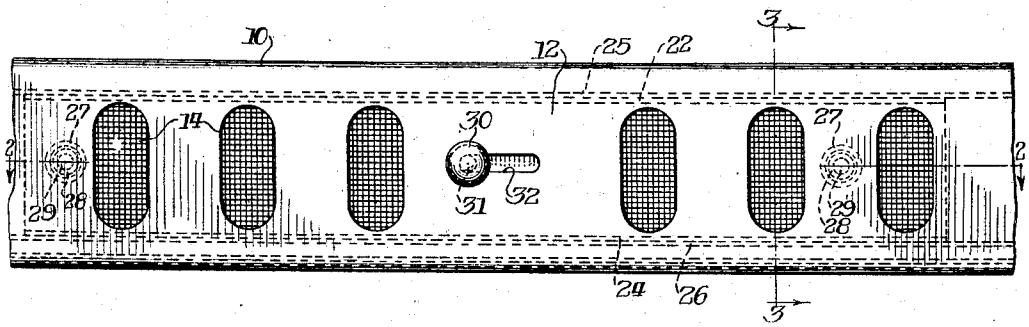


Fig. 2

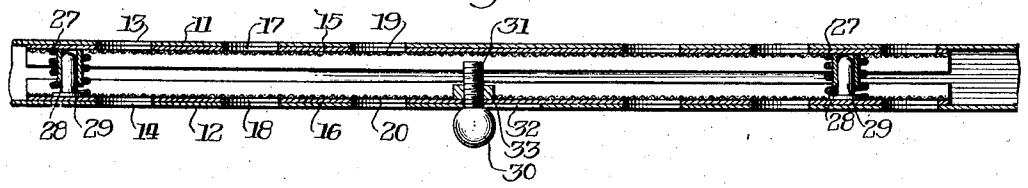


Fig. 3

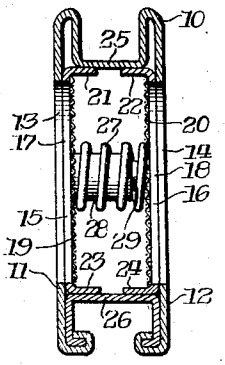
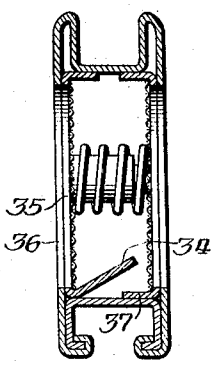


Fig. 4



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UNITED STATES PATENT OFFICE

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SASH VENTILATOR

Application filed October 6, 1928. Serial No. 310,754.

This invention has to do with sash ventilators of the type in which the ventilator is mounted in the rail of the sash.

The object of the invention is to provide an improved ventilator of the type described which is inexpensive to manufacture, is easy to install, will fit into rails of different sizes, will not stick in opening or closing, effects a double screening of the air when open, and effects a double closure of the air openings when closed.

In order that the invention may be readily understood, two different forms of the same are presented herein, but it will of course be appreciated that such forms have been chosen merely for the purpose of exemplification and that the invention is capable of embodiment in other structurally modified forms coming equally within the scope of the claims.

In the accompanying drawings:

Fig. 1 is a fragmentary side view of a sash rail equipped with the ventilator;

Fig. 2 is a horizontal longitudinal section, taken on the line 2—2 of Fig. 1;

Fig. 3 is a vertical transverse section, taken on the line 3—3 of Fig. 1; and

Fig. 4 is a view corresponding to Fig. 3, showing a slightly modified form of the ventilator.

The ventilator shown in Figs. 1, 2 and 3 of the drawings is located in the lower rail 10 of a hollow sheet metal sash. The side walls 11 and 12 of the rail are provided with openings 13 and 14 through which ventilation is effected. Two flat sheet metal plates 15 and 16 are positioned within the rail 10 against the walls 11 and 12 and are provided with openings 17 and 18 which register with the openings 13 and 14 when the ventilator is open. The inner faces of the plates 15 and 16 are covered with wire screens 19 and 20, and the edges of the plates are provided with inturned upper flanges 21 and 22 and inturned lower flanges 23 and 24, which flanges are in sliding engagement with the upper and lower walls 25 and 26 of the rail.

The plates 15 and 16 are pressed resiliently against the inner faces of the side walls 11 and 12 of the rail by means of compressed coil springs 27, and are caused to shift in unison longitudinally within the rail by means of sleeves 28 on the plate 15 which telescope with studs 29 on the plate 16. The sleeves 28 and studs 29 also serve to position the springs 23.

By shifting the plates 15 and 16 longitudinally within the rail, the openings 17 and 18 in the plates may be moved into or out of register with the openings 13 and 14 in the side walls of the rail. The shifting is effected by means of a finger-piece 30, which finger-piece has a screw-threaded shank 31 which extends through a horizontal slot 32 in the wall 12 of the rail and screws into a nut 33 which is secured to the inner face of the plate 16. To remove the ventilator from the rail, it is merely necessary to unscrew the finger-piece 30 and slide the plates 15 and 16 out of one end of the rail, which end may be opened for that purpose. Since the plates 15 and 16 are pressed resiliently by the springs 27 against the inner faces of the walls of the rail, the same plates may be used in rails of different sizes.

In Fig. 4 is shown a slightly modified form of the ventilator in which the lower flange 34 on the plate 35 which slides against the inner face of the outside wall 36 of the rail is made of such length as to overlap the lower flange 37 on the other plate and is arranged at an inclination, whereby to provide a drainage surface sloping toward the outside openings.

I claim:

1. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, spring means for maintaining the plates against the walls of the rail independent of the distance between the walls, and means for shifting the plates to move the openings therein into or out of register with the openings in the walls of the rail.

2. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the

walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, wire screens attached to the plates over the openings therein, spring means for maintaining the plates in properly spaced relation, and means for shifting the plates to move the openings therein into or out of register with the openings in the walls of the rail.

3. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, spring means for maintaining the plates in properly spaced relation, and a removable finger-piece connected with one of the plates and extending through a slot in one of the walls of the rail for shifting both of the plates to move the openings therein into or out of register with the openings in the walls of the rail, said finger piece limiting the shifting movement of the plates, and said plates being shiftable beyond such limit when the finger piece is removed whereby to effect the removal of the plates through one end of the rail.

4. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, springs for pressing the plates resiliently against the walls of the rail, telescoping members secured to the plates for causing the plates to shift in unison, and a finger piece connected with one of the plates through a slot in one of the walls of the rail for shifting the plates to move the openings therein into or out of register with the openings in the walls of the rail.

5. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, compressed coil springs between the plates for pressing the plates resiliently against the walls of the rail, telescoping members connected with the plates for positioning the coil springs, and exteriorly accessible means for shifting the plates to move the openings therein into or out of register with the openings in the walls of the rail.

6. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, inturned flanges along the upper and lower edges of the plates for sliding engagement with the upper and lower walls of the rail, wire screens attached to the plates over the openings therein, and means for shifting the plates to move the openings therein into or out of register with the openings in the walls of the rail.

7. In a sash ventilator, a hollow sheet metal sash rail provided with openings in the walls thereof, two spaced sheet metal plates positioned in the rail against the walls thereof and provided with openings therein for registration with the openings in the walls of the rail, inturned flanges along the upper and lower edges of the plates for sliding engagement with the upper and lower walls of the rail, wire screens attached to the plates over the openings therein, and means for shifting the plates to move the openings therein into or out of register with the openings in the walls of the rail, one of said lower flanges being arranged at an inclination to effect drainage toward the outside openings.

In testimony whereof I have hereunto subscribed my name.

CARL H. LARSON.